National Aeronautics and Space Administration.
Glenn Research Center.
Plum Brook Station.

Decommissioning news.

A quarterly newsletter to inform the public about NASA's Decommissioning Activities.

EIGHTEENTH EDITION. **JANUARY 2006.**

NASA Conducting Off-Site Sampling; Working with Federal and State Agencies.

Last August, as part of efforts to identify any areas that might need to be cleaned as part of decommissioning, NASA took sediment samples in Pentolite Ditch. Pentolite Ditch is the stream into which permitted discharges of water flowed from the reactor during normal operations (1961-73). NASA had anticipated there would be some radioactivity above background along the ditch. This sampling was done with extremely sensitive detection equipment, to enable NASA to look at every possible isotope associated with the reactor's former operations. The sampling revealed trace amounts of radioactive material in sediment (silt) samples along the length of the ditch – but not in the water – and none of the levels presented any threat to the public's health. The highest levels were found where the reactor discharged into the ditch and then the levels decreased along the ditch up to where it empties into Plum Brook.

Because Plum Brook exits NASA property about 100 feet beyond the point were the ditch empties into the brook, NASA decided to do some limited sampling along Plum Brook, taking 30 samples from four locations in a one-mile stretch from the outfall of Pentolite Ditch to Bogart Road, to determine if any traces could be found beyond the NASA fence line. The results showed there was material above background levels, but not at levels that would pose any health concern. NASA immediately reported the findings to U.S. Nuclear Regulatory Commission (NRC) and the Ohio Department of Health-Bureau of Radiation Protection (ODH), as well as locally to Erie County Emergency Management Agency Director Bill Walker and Erie County Health Commissioner Peter Schade.

Continued on page 2.

PROJECT UPDATE:
NASA Continues with Equipment Removal and Begins Decontamination Work.

NASA continues to move ahead on decommissioning, with a busy last quarter of 2005. A small crew from subcontractor MOTA Corp. removed all loose and fixed equipment from the first of seven Hot Cells in the Hot Lab Building, where experiments on materials exposed to the reactor core were analyzed when the facility was operational. Workers started on Hot Cell #1, removing equipment including sensitive manipulator arms located outside the cell, which once enabled reactor workers to remotely analyze the experiments. NASA also continued with the characterization of Reactor Facility buildings and grounds, to determine their radiation content and required cleanup levels. "It's a different project from what we had before," observed NASA Acting Decommissioning Project Manager Keith Peecook. "But it's one very much alive and progressing."

NASA began decontamination work on Hot Cell #1, with Peecook anticipating that because this is the largest cell, it would have the highest concentration of low-level radiation. He noted, "The results of decontaminating this cell will determine the best way to proceed with the subsequent cells, and ultimately the path forward for the Hot Lab Building." Equipment removal and decontamination are expected to continue in the Hot Cells over the next few months. Meanwhile, a crew from subcontractor BSI Services jumpstarted decontamination work on embedded piping in the pipe trench and nearby Primary Process Piping Room, located at the minus-25-foot level of the Reactor Building, which was the central hub for many piping systems when the reactor operated. Peecook said he was pleased with recent work, stating. "We hit the ground running; we're moving forward." ■

■ In the photo in the upper right corner of this article, NASA conducted Plum Brook sampling near bridge abutments, where sediment was likely to accumulate. A worker has been taking samples adjacent to the Hull Road overpass (top of photo).

■ In the photo in the lower right of this article, shows an external look at the Hot Cells with all the "manipulator arms" removed from the outside of the cells. The dark object at the left of the photo is a periscope once used for looking into a cell.

■ In the photo in the lower right of this article, A decontamination worker, wearing a protective suit and breathing apparatus, uses a cloth to clean a manipulator arm in Hot Cell #1. The arm formerly extended outside the cell and is being removed.

Other ways to receive Decommissioning Information.

Fact Sheets.

NASA has produced fact sheets dealing with various aspects of Decommissioning. Copies are available at public libraries throughout Erie County, at the Community Information Bank at the BGSU Firelands Library, on our Decommissioning Website at www.grc.nasa.gov/WWW/pbrf and by calling our Information Line at 1-800-260-3838.

Community Information Bank.

NASA has established a Community Information Bank (CIB) at the BGSU Firelands Library. The CIB serves as a permanent repository of information on the Decommissioning Project which NASA continually updates. All information at the CIB is available to the public upon request.

Decommissioning Website.

Decommissioning information is available on-line. Visit us at www.grc.nasa.gov/WWW/pbrf.

Speakers.

NASA will provide speakers upon request to civic, community and school organizations throughout Decommissioning. A video or slide presentation may be presented. For further information, contact Sally Harrington through our Information Line at 1-800-260-3838, her direct line at 216-433-2037, or at s.harrington@grc.nasa.gov.

Call our Information Line at 1-800-260-3838.

Off-site Contamination (Continued from page 1).

What Was Found.

According to NASA Acting Decommissioning Project Manager Keith Peecook, NASA then did what he referred to as a "scoping" survey, to determine the extent or boundaries of the material in Plum Brook. The same sensitive detection equipment was used and the water levels in Plum Brook were very low last summer, thus enabling NASA to find anything that might possibly be present. A total of 80 samples were taken from three miles upstream of Pentolite Ditch to five miles south of it, along Plum Brook to where it meets Sandusky Bay. These results showed very low levels of Cesium 137 and Cobalt 60, primarily in a one-mile stretch from the NASA PBS fence line to Bogart Road. The levels were found in the sediment at varying depths up to 18 inches, with Peecook, noting, "Over time, the material likely has built up in the sediment." He added, "It's our material, it's our responsibility." Peecook emphasized that the levels found "do not represent a health risk to residents or young children during normal use of your yard, or Plum Brook; but because they are above background, we do need to do more sampling." Peecook's statements were quickly confirmed by officials from both the NRC and ODH, while Schade praised NASA for its responsiveness.

The results of the scoping survey helped define the area where material is located, indicating that it appears to be contained along a one-mile stretch. NASA also re-checked other off-site locations that had been routinely sampled over the years the reactor operated and since closure, to make sure there were no other areas potentially been impacted from the reactor's historic operations. All results showed that levels were at normal area background, with no residual material from the reactor's operation.

Sharing Plans and Results.

In keeping with NASA's commitment to keep the community informed, the sampling information was posted, soon after its discovery, on the 24-hour, toll-free Information Line and the project Website, and this information continues to be updated. NASA also updated the community in early October, informing the project's Community Workgroup members, who were then able to respond to questions from the larger community. NASA updated the media at the annual project briefing, to Workgroup members at their quarterly meeting, and to the public at the project's annual Community Information Session, all in mid-October.

In early November, NASA developed a comprehensive sampling plan, to sample a 1.5 mile stretch of Plum Brook, from Pentolite Ditch to Route 250, involving approximately 700 samples – with so called "split" samples to also be collected by the NRC and ODH and used for independent verification of NASA's analysis. The plan was submitted to the NRC and ODH for review, and was also given to the Erie County Health Department and the Workgroup. To answer questions raised by the public during the Workgroup meeting about the potential for animals to "uptake" the material, NASA took samples of deer tissue and bones during the Plum Brook Station hunts. "Deer are browsers," explained Project Radiation Safety Officer Bill Stoner. "So they would be the most likely animal to accumulate any residual radiation from what they eat." NASA sent the deer samples to an independent, off-site laboratory and all results came back far below screening value levels, indicating that the deer had ingested no radiation.

NASA invited property owners living along, or near, the affected section of Plum Brook to a November meeting attended by neighbors, and state and county health officials. Peecook gave an overview of the Decommissioning Project, and provided an update on what has been found, the plan for further sampling, and the need for permission to enter the owners' properties to obtain more samples of Plum Brook sediment. Attendees were encouraged to voice questions and concerns; several asked about possible health concerns to themselves or their children. They also wanted to know what the next steps would be – especially if any cleanup would be done, and what agencies would make the decision.

Peecook emphasized that none of the levels found pose any health concern. He added that NASA had health and safety specialists look at the possible dose someone might receive if they were to go to the areas where the highest levels were found and have contact directly with the material – assuming there was no water to act as a further shield and assuming repeated contact in the same location. This analysis showed that even at the highest levels, the amount was approximately 0.2 % of a person's normal yearly exposure to radiation from all sources. Peecook said the responsible federal (NRC) and state (ODH) agencies will make the ultimate decision on whether cleanup is required, but emphasized that more sampling was needed to determine what the next steps should be.

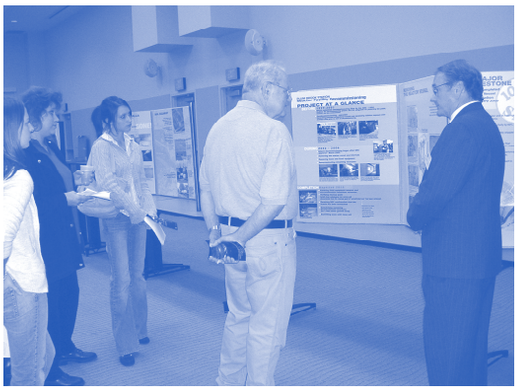
What's Next.

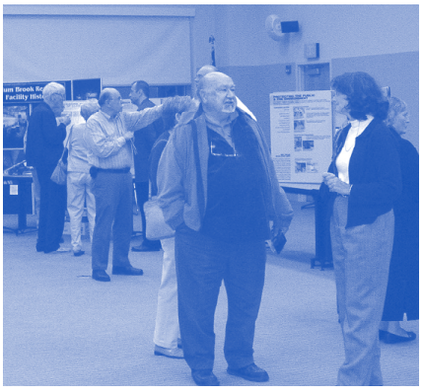
NASA began conducting the first phase of the sampling plan in mid-November, collecting more than 100 samples from Plum Brook adjacent to NASA-owned land, and will continue the process as permission for access is received and the weather allows. Peecook said he hopes to have all samples collected and analyzed by early spring. He pointed out that decommissioning will not be complete "until any actions that need to be taken are completed, and all federal and state agencies have concurred." He added, "NASA's top priority remains the protection of the residents, the workers and the environment. We intend to meet that commitment." ■

■ In the photo in the upper left corner of this article, Workers are using shovels and other hand tools to take sediment samples.

■ In the photo in the lower left corner of this article, NASA Acting Decommissioning Project Manager Keith Peecook (right) provided a project update at October's Community Information Session that included information on off-site sampling issues.

Something of interest for all draws new faces to COMMUNITY INFORMATION SESSION.





NASA held the Decommissioning Project's sixth annual Community Information Session (CIS) on October 18 at the state-of-the-art BGSU Firelands Cedar Point Center. The multimedia event featured something of interest to people of all ages, including a series of project displays, small souvenirs for children and an in-depth presentation by NASA Acting Decommission Project Manager Keith Peecook, who updated visitors on project accomplishments (see our October 2005 edition) and the results of recent sampling in Plum Brook, off-site of NASA Plum Brook Station. Some 60 visitors, many attending for the first time, were greeted by members of the project's Community Workgroup, who had held a quarterly meeting just before the event. Several attendees also viewed segments of the documentary video "Of Ashes and Atoms."

Ken Pelletier of Milan was making his first CIS visit, noting that he had once been on a tour of Plum Brook Station. He liked Peecook's presentation and some of the displays, observing, "NASA does a pretty good job of keeping people informed." Also attending was Perkins resident Don Cope, a retired Sandusky High School science teacher, now a part-time instructor at BGSU Firelands. He said the CIS was "very professionally done…an interesting program," adding, "The cookies were pretty good too."

As is true of every CIS, a number of attendees completed survey forms, providing NASA with very positive feedback. Most cited Peecook's presentation, and the opportunity to have informal, face-to-face discussion with Decommissioning Team members, as the best parts of the event. Many others also mentioned the displays, the documentary and the chance to climb aboard the Aero Bus, a NASA Glenn traveling exhibit, as popular features. Several respondents also offered comments, praising the presentation and overall event, and urging NASA to "keep up the good work," something NASA is committed to doing until the project is completed. ■

Environmental Sampling Update: Project controls are working.

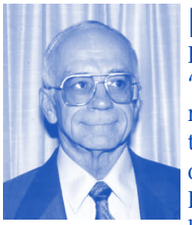
As he has done periodically for the past three years of decommissioning, NASA Environmental Manager Peter Kolb presented data from the ongoing monitoring program to the Community Workgroup at the October meeting. "There have been no changes in the environment as a result of decommissioning activities," reported Kolb. This is especially significant in light of having recently completed segmentation – the most intense radiological work in the project. "Project controls, the safeguards in place to keep radiation contained onsite, have been working as they should," said Kolb.

Continued on page 4.

■ In the photo in the upper left corner of this article, NASA Decommissioning Team member Chuck Fellhauer (right) staffed a project display on completed segmentation work and answered questions from interested visitors (left).

■ In the photo in the upper right corner of this article, NASA retiree Len Homyak (left) and Workgroup member Anne Hinton (right), both of Huron, chat in front of project displays.

COMMUNITY WORKGROUP MEMBER PROFILE.



Bill Ommert.

It was Mark Twain who said, "It is better to keep one's mouth closed and let people think you're a fool, than to open it and remove all doubt." But Twain might have altered his observation, had he met a quiet man who no one thinks a fool – Huron County Emergency Management Agency (EMA) Director Bill Ommert. Born in Erie County but raised in the Norwalk area, where he has lived ever since, Ommert became EMA Director in January 1991. A graduate of Bowling Green State University, he has worked to substantially reduce the number of railroad grade crossings and deals daily with several issues, including railroad safety and contamination releases.

Ommert first learned about the Decommissioning Project from newspaper accounts, as well as through frequent contact with his Erie County counterpart – and fellow Workgroup member – Bill Walker. He joined the panel in August 2004 and shortly thereafter, toured the Reactor Facility with other members, something he says "helped me understand the project. It's quite an undertaking."

His work with both the County and NASA proved especially helpful last June, when NASA began shipping tons of very low-level radioactive soil, in special packaging, to a rail siding in Huron County (Willard). Ommert says he received calls from workers and management at a manufacturing facility adjacent to the rail siding, noting, "There were some very concerned employees working 100 feet away" from the siding. He arranged meetings and phone calls between NASA, plant management and Willard city officials, which he explains, "were just a matter of bringing people together to eliminate rumors." He praised NASA for quickly sharing information on the shipments, including a meeting between Acting Decommissioning Project Manager Keith Peecook (and his predecessor, Tim Polich) and plant management, saying "I appreciate that Keith and Tim came down to meet with people and alleviate any concerns…I was glad I was on the Workgroup."

As a Workgroup member, Ommert says he does not get a lot of questions from the public, but those he has received come from "people concerned with contamination and what's being left behind." He adds that he's always been able to answer most questions, based on Workgroup presentations, and has referred a few to NASA. Asked what he thinks people should know about the Decommissioning Project, the man who keeps a quiet watch over Huron County speaks enthusiastically, noting: "If you have any questions, there's nothing that NASA and the Workgroup won't discuss."

Spoken like a man with something to say.

Environmental Sampling (Continued from page 3).

Established in 2001, the project's Environmental Program monitors decommissioning activities by regularly sampling surface water, sediment, groundwater and air. These samples are collected on and offsite (upstream, at the facility and downstream) and analyzed for radiologic activity by an off-site, certified laboratory. Air samples are collected weekly and monthly. Surface water and sediments are collected on a monthly basis. For groundwater, five shallow wells and five deep wells are sampled monthly, while one sump is sampled monthly, one quarterly, and all others annually.

The sample results are compared to what is referred to as Project Specific Action Limits (PSAL), which are set at levels well below regulatory limits. "If our sample results begin to approach the PSAL, that's a red flag," said Kolb, and further actions would be initiated such as additional sampling and more detailed analysis, and an in-depth review of decommissioning operations. Kolb points out that there have been instances of "false positives" when, for example, excess sedimentation or other naturally occurring radionuclides in the ground are found in water samples. False positives are more frequent in some wells, which are dry most of the time. To date, only one sample result - above the PSAL but well below regulatory limits - was attributed to decommissioning in March of 2004 in a sump at the minus-25-foot level in the Reactor Building. After further investigation, it was thought that something might have fallen into the sump as removal work was performed overhead. Elevated levels were not found in subsequent sump sampling and workers were briefed on using precautionary measures when working over sumps.

"Routine sampling helps keep a finger on the pulse of the environment and in this case, having nothing new to report is good news," said Kolb. Environmental sampling will continue throughout decommissioning. Semi-annual sampling and analysis reports are supplements to the NASA PBRF Decommissioning Project Environmental Media Sampling and Analysis Cumulative Report (November 2000-October 2002), published in March 2003. Copies of these publications are available at the Community Information Bank in the BGSU Firelands Library. ■

NASA Glenn Research Center
Plum Brook Station

6100 Columbus Avenue
Sandusky, Ohio 44870

LEARN MORE ABOUT NASA's.
Decommissioning Project.

Next Community Workgroup Meeting.
TUESDAY, JANUARY 17, 7 p.m. - 9 p.m.
BGSU Firelands.
Cedar Point Center.
One University Drive, Huron.

This meeting follows a public meeting with U.S. Rep. Marcy Kaptur and NASA (5 p.m. - 7 p.m.).

BOTH MEETINGS ARE OPEN TO THE PUBLIC.